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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/828,410

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Harold E. Erwin

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INTELLECTUAL PROPERTY DEPARTMENT
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EXAMINER

DRODGE, JOSEPH W

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/828,410

Applicant(s)

ERWIN, HAROLD E.

Examiner

Joseph W. Drodge

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Claims 1 and 3-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The instant Specification fails to provide explicit support for claiming of a chamber sized to hold a volume of solution required to complete a single cleaning of a fuel injection system of amended claim 1. What constitutes "single cleaning" or "completeness of cleaning" is not described. Similarly, the instant Specification fails to provide explicit support for claiming of consuming of cleaning solution, or elimination of need for removing cleaning solution of amended claim 13. What constitutes "consuming" or "eliminating of need for removal" is not described. Additionally, it is not clear where in the instant Specification, support is found for handling circulation of cleaning solution utilizing only pressure supplied to the fluid by the fuel injection system, and not defining what is encompassed by such "system".

Claims 1 and 3-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Within independent claims 1, 3-16 and 20, the metes and bounds, or scope of "chamber is 'sized' to hold a volume of cleaning solution required to 'complete' a single cleaning' of the fuel injection system". Not only do size, volume and needs of fuel injection system vary considerably between different automobiles and other internal combustion engines, additionally, selection of cleaning solution volumes and length of time of cycles of cleaning are strictly

Art Unit: 1797

arbitrary, unbounded choices of vehicle operators or personnel of automobile maintenance facilities.

Additionally, in claim 1, it is unclear whether presence of a fuel pump, per se. is a positive recitation.

In claim 13, it is unclear what is meant by "consuming" of cleaning solution, or 'eliminating of need for removing cleaning solution" after cleaning. The cleaning solution does not require removal from what structure (the fuel injection system?, the cleaning fluid circulation loop?)

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1,3,4, and 8-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor patent 4,787,348 in view of Flynn patent 6,298,947 Taylor discloses for claims 1,20 and

13, cleaning a fuel injection fluid system in a vehicle with a cleaning/recirculation system (Abstract, column 1, lines 54-60) comprising a filter container 106 defining an annular, surrounding chamber enclosing a filter, 1st conduit 83 or fluid supply 31 receiving pressurized fluid, pressurized from the fuel injector pump and the fuel pump of a vehicle, to and from the filter and coupled to 2nd conduit 82/38 that returns fluid to the fuel injection system. The general cleaning operation is described at column 4, line 49-column 5, line 15.

For method claims, including claim 13, the system of Taylor includes the system being integrated into a housing 12 that is coupled to and from the fuel injection conduits, and movable or portable (column 2, lines 49-58), an upstream mixture supply tank container 34 and the filter container 106 being filled prior to the engine of the fuel injection system being started or running to pressurize and re-circulate mixture of fuel and cleaning solution through the fuel injection device (column 4, lines 29-33, lines 49-59 and column 4, line 67-column 5, line 8). Fuel fluid and cleaning chemical are mixed in upstream tank 34 forming a solution that is further mixed as it travels together into the inlet structure and chamber of the container 106. The cleaning solution is emptied or consumed during the cleaning operation, thus eliminating need for cleaning solution removal (column 5, lines 8-10).

The claims all differ in requiring the container chamber that surrounds the filter, proper, being precisely sized with a volume, required to clean the engine fuel injection system, during a specified cleaning period. However, Flynn teaches a system for recirculating mixed cleaning solution and oil to an engine being cleaned, while running and coupled to a mobile cleaning system. The Flynn system also utilizes a container having an annular fluid/cleaning solution chamber surrounding a filter, and such container is provided with a scale or graduations to enable

Art Unit: 1797

measuring and transferring of a precise amount of cleaning solution for use with the engine being cleaned. See especially column 2, lines 40-44 and 62-65, also column 3, lines 48-57. It would have been obvious to have precisely sized the container and chambers of Taylor to hold amounts of cleaning solution/fuel mixture required for cleaning cycles, as taught by Flynn, to provide a precise and adequate amount of fluid mixture solution for cleaning, without exceeding the capacity for drainage and collection of spent cleaning solution mixture.

For dependent claims, Taylor and Flynn also disclose: adapter connectors for claims 3 and 13 (Taylor column 3, lines 36-39); a fuel injection pump that regulates pressure to the system containers (Taylor) for claims 4 and 15 (or see the pressure regulator and air sources of Flynn for pressurizing entire cleaning circulation system (column 3, lines 25-38)), fuel injection pumps are also well known to utilize pressurized air; scale on the housing container for claim 7 (Flynn column 2, line 62);

For other claims: the housing of the Flynn container may have indicator or scale marks for claim 6 on the control console (column 3, lines 39-57); vented cap to facilitate container draining for claims 8 and 16 (Flynn at column 3, lines 1-4); the containers having annular fluid mixture-containing chambers and filters of both Flynn and Taylor being cylindrical with plural, centered top openings for fluid inlet or induction and outlet or exit of fluid for claims 9-12 (figure 2 of Flynn and figure 2 of Taylor); circulation of mixed fluid with the engine running during system cleaning for claim 14 (beginning at column 4, line 67 of Taylor). For claims 17-20, conduit connection-breaking and re-connecting steps are all described at Taylor at column 3, lines 9-25 and figures 1-2 and the figures and column 2, lines 3-14 of Flynn.

Art Unit: 1797

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor patent 4,787,348 in view of Flynn patent 6,298,947, as applied to claims 1,3 and 4 and further in view of Bugar et al patent 4,986,904. Claims 5 and 6 differ in requiring the filter housing to be transparent; Bugar et al showing a fluid filter for cleaning recirculated fluid in a vehicle with such transparent housing (column 5, lines 26-30). It would have been obvious to one of ordinary skill in the art to have constructed the filter housing of Taylor and Flynn to be transparent, as taught by Bugar et al, to enable viewing of the filter and container contents to ensure operator awareness of contamination and need to replace/service the filter.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor patent 4,787,348 in view of Flynn patent 6,298,947 and further in view of Habiger et al patent 5,374,355. Claim 7 requires there being a suspension hook atop the container operable for hanging the container. Such suspending hook is suggested by Habiger at column 4, lines 53-61. Such hook would have been an obvious expedient for accessing the filter housing so as to remove and replace or clean the filter.

Applicant's arguments filed on September 14, 2007 have been fully considered, to the extent they remain germane but they are not persuasive. It is argued.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

Art Unit: 1797

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 1797

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Drodge at telephone number 571-272-1140. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Roy Sample, can be reached at 571-272-1376. The fax phone number for the examining group where this application is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or Public PAIR, and through Private PAIR only for unpublished applications. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JWD

October 19, 2007


JOSEPH DRODGE
PRIMARY EXAMINER